PBXgateway™

Extending the feature-rich corporate PBX to branch offices, teleworkers, remote call center agents and mobile workers over traditional and next-generation networks

The PBXgateway is a high performance unit that resides at the corporate voice system and terminates up to twelve remote users from any combination of MCK's Remote Voice Protocol over IP (RVPoIP)™ products including:

- **EXTender™ 6000 for Branch Offices**
- **EXTender 4000 for IP**
- **EXTender 3200 for IDSL**
- **EXTender 100 for PC Clients**
- **Mobile EXTender[1]**

The PBXgateway also operates in serial Remote Voice Protocol (RVP)™ mode over traditional networks.

PRODUCT OVERVIEW

With MCK's PBXgateway, your remote workers can now enjoy all the features of your corporate PBX, wherever they are located. That's because the PBXgateway extends all the capabilities of your PBX to remote employees over circuit or packet networks.

The PBXgateway can be configured to operate in either a managed IP packet network or a point-to-point synchronous WAN environment over traditional networks. In a traditional WAN environment, up to two EXTender 6000s can connect into the PBXgateway running MCK's Remote Voice Protocol (RVP). RVP relies on HDLC encapsulation over a serial port to transmit voice signals.

REMOTE VOICE PROTOCOL OVER IP (RVPOIP)

To extend remote voice capability over a managed IP network, simply install a PBXgateway at your corporate site and then choose a combination of remote IP client units to meet your needs. Up to 12 ports can be terminated at the PBXgateway. Branch offices, teleworkers and remote call center agents can be connected using standard IP network termination devices such as IP routers, DSL or cable modems and cell phones.

As long as the IP network can be managed to ensure sufficient bandwidth and Quality of Service (QoS), MCK's solution will deliver high quality voice.

You can now extend full corporate PBX capabilities over IP networks, making voice and data convergence a reality.

MCK's Remote Voice Protocol converts digital voice and phone signaling into highly efficient data packets. Sophisticated software features include a G.165-compliant echo canceller enhanced with extremely robust double-talk performance, manufacturer-provided PBX protocols and a range of industry standard voice compression options.

MANAGEMENT FEATURES

MCK's business voice solutions have been designed for operational simplicity. All of the system's configuration, management, and administrative and diagnostic functions may be managed from the PBXgateway using a serial connection, Telnet or an inband network connection from a remote client. This flexibility allows you to maximize your company's system administration resources and lower operating costs.

PBXgateway

KEY BENEFITS

- **Flexibility**
  Mix and match client modules and Mobile EXTenders up to a total of 12 ports. This gateway supports up to two EXTender 6000 for Branch Offices on serial RVP mode.

  Configure the PBXgateway to operate in managed IP network (Layer 3) or in traditional circuit switched and frame relay (Layer 2) environments.

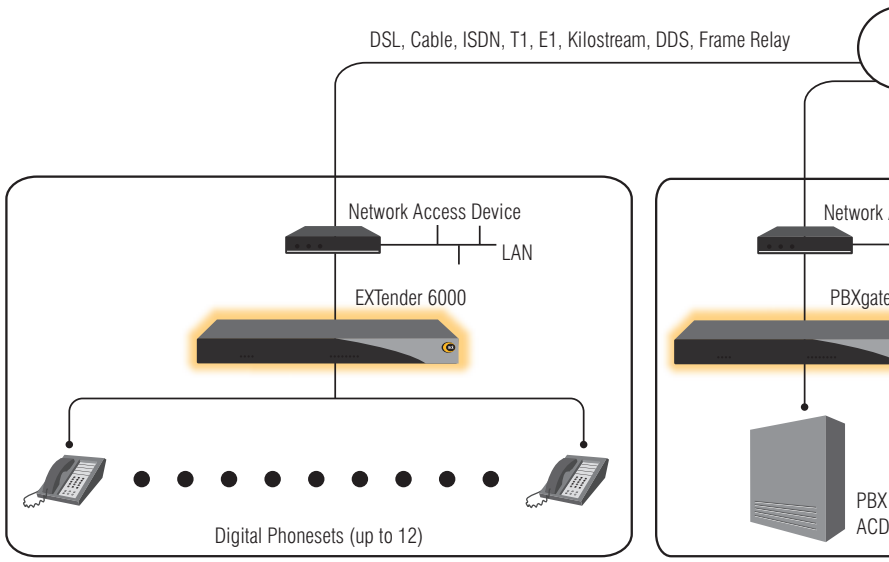
- **Increased Productivity**
  Remote employees are able to use the same full-featured digital sets and have access to corporate PBX functions, like voice mail, call accounting systems, unified messaging and ACD systems.

- **Network Efficiency**
  A choice of network topologies and variable compression rates minimizes communications cost.

  Leverage IP data network infrastructure for both voice and data traffic.

FRONT VIEW

DB-9 console port for easy system management.



Branch Office **Corporate O**

- **Ease-of-Use**
  Simple installation process.

  Easy–to-use configuration tools enable virtual management of remote users from a central location.

- **Investment Protection**
  MCK is committed to providing you with flexible product solutions for today's, and tomorrow's, needs.

KEY FEATURES

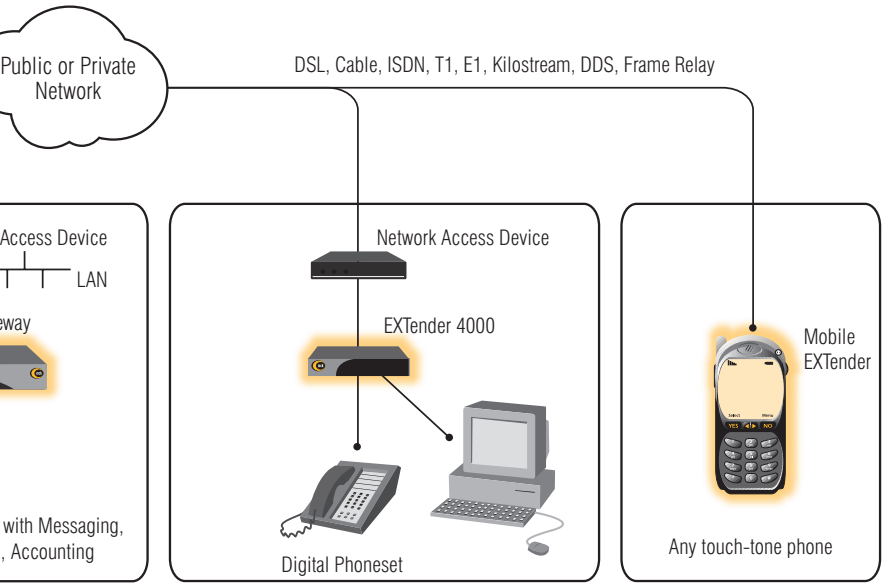
- Synchronous transmission
- Support for asynchronous TA adapters
- Encrypted username and password allocated by system administrator to each port
- Network down recovery (serial RVP mode only)
- Call suspend mode on ISDN lines with Asynch TA
- Support for IP Precedence and DiffServ QoS mechanisms

PBX/KTS COMPATIBILITY

- Lucent
  DEFINITY® ECS (release 3 or later)
- Nortel
  Meridian® and Norstar®
- NEC
  NEAX2000™, NEAX2400™, NEAX Express and Electra Elite
- Toshiba
  Strata DK
- Ericsson
  MD110

GENERAL SET-UP GUIDELINES

- The PBXgateway is deployed within 500 feet from the PBX/KTS at the corporate office
- The PBXgateway can be configured to run on IP transport or traditional circuit switched and frame relay networks
- When running RVPoIP, the gateway connects to a network access device via the 10Base-T LAN port



- When running serial RVP, the gateway connects to a network access device via the DB-25 WAN port(s) and up to two EXTender 6000s can be connected to the gateway
- The PBXgateway running software release 2.0 supports the Mobile EXTender
- EXTender 6000 is the remote client that supports serial RVP in point-to-point mode
- Remote clients that support RVPoIP are the EXTenders 6000, 4000, 3200 and 100 models
- The PBXgateway can support both an serial RVP client and RVPoIP clients simultaneously, up to 12 ports total
- Network access device should be configured to provide Quality of Service* (QoS) support in order to guarantee voice service quality
- The PBXgateway is available in 8-port and 12-port configurations
- Minimal setup programming required, accomplished via Telnet, RS-232 console interface, or inband RVP

ONLINE RESOURCES

- List of recommended network access devices available at www.mck.com in the Products section

SOFTWARE SUPPORT

- TCP/IP protocol support for IP traffic and management access
- RVPoIP uses UDP/IP protocol for voice transmission
- Serial RVP uses HDLC encapsulation for voice transmission
- Management and Utilities – Telnet, inband RVP, RS-232 console interface, SNMP, HTML (monitoring only), phone display (limited features)
- Wind River's VxWorks™ operating system
- Software upgradeable via LAN FTP, RS-232 serial port to PC, or inband connection between the PBXgateway and the EXTender 6000

BACK VIEW

CONNECTORS INCLUDED IN BACKPLANE OF UNIT:

- Internal power supply
- One Amphenol connector for 50-pin RJ-21 cable for interface with digital telephone sets
- Two DB-25 WAN ports for serial RVP connection. Redundant interfaces include V.35, RS-232 or RS-530
- One RJ-45 10/Base-T Ethernet for RVPoIP and Telnet/HTML system management

PBXgateway

VOICE PROTOCOLS

- Choice of voice compression standards:
  - G.729A (8 Kbps)
  - G.726 (24 or 32 Kbps ADPCM)
  - G.711 (64 Kbps PCM)
- G.165 echo canceller software, with MCK proprietary double-talk detection enhancement
- MCK Remote Voice Protocol (RVP)
- MCK Remote Voice Protocol over IP (RVPoIP)
- IP voice packets are tagged for network traffic prioritization using IP Precedence or DiffServ

HARDWARE

Form Factor: Low profile, 1U rack mountable unit

Other Components:

- Motorola 68MH360-33 processor
- 4 MB Flash Memory, 512 Kb ROM, 4 MB DRAM
- DSP Analog Devices 2187 (52 MIPS)

POWER SUPPLY

- Internal
- Universal auto ranging power supply
- Line voltage: 100 – 240 V
- Frequency: 47 – 63 Hz
- Maximum power consumption: 1.4 Amps

DIMENSIONS

- Size: 17" x 8" x 1¾" (432mm x 203mm x 44mm)
- Weight: 6 lbs 7 oz (3 kg)

QUICK REFERENCE CHART

PBXgateway	PBXgateway II
Available in 8- and 12-port configurations	Available only in a 24-port configuration
Supports the Mobile EXTender and the EXTender 6000, 4000, 3200 and 100 models	Supports the Mobile EXTender and the EXTender 6000, 4000, 3200, 3000 and 100 models
Equipped with one DB-9 console port	Equipped with two DB-9 console ports
Outfitted with one 10Base-T LAN port	Outfitted with two 10/100Base-T LAN ports

OPERATING ENVIRONMENT

- Temperature: 32° – 130° F (0° – 55° C)
- Relative humidity: 5 to 95%

REGULATORY APPROVALS

- FCC Part 15 Class B and FCC Part 68, NRTL/CSA and CE Mark

WARRANTY

- One-year limited warranty for parts and labor

[1]Supported by PBXgateway running software release 2.0 or later.

Product specifications subject to change without notice.

MCK, the MCK logo, EXTender, PBXgateway, RVP and RVPoIP are trademarks of MCK Communications, Inc. Other brand and product names referenced herein are trademarks of their respective holders.

*MCK's IP-based products utilize Voice over IP (VoIP) technology to deliver remote voice solutions. The voice quality of these solutions is dependent on variables such as available bandwidth, network latency and quality of service (QoS) initiatives, all of which are controlled by the network and Internet service providers. Because these variables are not in MCK's control, it cannot guarantee the performance of the user's IP-based remote voice solution.

© 2000 MCK Communications, Inc.
03-PBXG-1000

MCK Communications, Inc.
Corporate Headquarters
117 Kendrick Street
Needham, MA 02494-0708
Toll Free: 888-454-7979
Telephone : 617-454-6100
Fax: 617-454-6101
www.mck.com

Research & Development Center
4040 Bowness Road N.W.
Calgary, AB Canada T3B 3R7
Toll Free: 800-661-2625
Telephone: 403-247-9777
Fax: 403-247-9078

Applications Business Unit
402 West Bethany
Allen, TX 75013
Toll Free: 800-634-4976
Telephone: 972-727-1200
Fax: 972-727-4243

European Office
494 Midsummer Boulevard
Central Milton Keynes, UK MK92EA
Telephone: (011) 44-870.241.0453
Fax: (011) 44-1908.255.700

mck communications